

## **ABSTRACT**

**RESEARCH PAPER:** Monitoring Associations Between Avian and Plant Communities on the Mary Gray Bird Sanctuary, Fayette County, Indiana

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**PAGES:** 60

A large body of research has documented declines in bird species diversity and population size of some bird species in eastern North America and linked these declines to large-scale land-use changes after European settlement of this region. However, the vegetation of landscapes in eastern North America continues to change in many parts of this region as previously farmed lands are left fallow and natural succession leads to reestablishment of forests. This study initiates long-term monitoring of the associations between vegetation characteristics and the diversity and composition of bird communities on the Mary Gray Bird Sanctuary. This area is currently undergoing both managed and natural restoration of vegetation after a history of extensive human disturbance. The Sanctuary is dedicated to providing a secure habitat for wildlife and is an excellent location for long-term monitoring of ecological changes over time. The study has established 60 permanent plots and set baseline data for vegetation composition and structure. Species composition and diversity of the bird community have been determined on these same permanent plots and associations between the vegetation and bird communities have been evaluated. This system of permanent plots also provides a framework for future monitoring studies of other wildlife species, including small mammals and herpetofauna.